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USA Patent Application
Ernst-Ulrich SIMON
LIGHT SOURCE COMPRISING A LARGE
NUMBER OF LIGHT-EMITTING DIODES

Priority: German Patent Application
100 63 876.7 filed December 21, 2000

Hon. Commissioner of Patents and Trademarks
Washington, D.C. 20231

S I R :

PRELIMINARY AMENDMENT

Please amend this application simultaneously with filing the
accompanying application as follows:

IN THE ABSTRACT

Cancel the Abstract and replace it with the Abstract presented on
the attached separate page.

IN THE SPECIFICATION

Page 1, Line 1, delete this line paragraph, namely "Description"

Page 1, Line 6, before this line insert the following paragraph
heading:

FIELD AND BACKGROUND OF THE INVENTION

Page 1, Line 32, before this line insert the following paragraph heading:

SUMMARY OF THE INVENTION

Page 3, Line 26, before this line insert the following paragraph heading:

BRIEF DESCRIPTION OF THE DRAWING

Page 3, Line 34, before this line insert the following paragraph heading:

DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

IN THE CLAIMS

(APPLICATION PAGES 6-7)

Before claim 1, change "Patent Claims" to --I CLAIM:--

Please cancel claims 1-10 without prejudice or disclaimer of the subject matter therein and substitute new claims 11-20 therefor:

11. (new) A light source comprising a large number of light-emitting diodes, wherein the light-emitting diodes (7) are mounted alongside one another on one face of a

flexible printed circuit (4), and are electrically conductively connected to conductor tracks (9) on the flexible printed circuit (4).

12. (new) The light source as claimed in claim 11, wherein the flexible printed circuit (4) is mounted with that face which is opposite the light-emitting diodes (7) on a stable mounting board (2), for heat dissipation.

13. (new) The light source as claimed in claim 12, wherein the mounting board (2) is composed of thermally conductive material.

14. (new) The light source as claimed in claim 13, wherein the mounting board (2) is connected to a heat sink or is in form of a heat sink.

15. (new) The light source as claimed in claim 12, wherein the flexible printed circuit board (4) is connected to the mounting board (2) by a thermally conductive adhesive or a thermally conductive adhesion layer.

16. (new) The light source as claimed in claim 11, wherein the conductor tracks (9) end in contact pads (10) on the flexible printed circuit (4), with lines (8) which

originate from the light-emitting diodes (7) making electrically conductive contact with the contact pads (10).

17. (new) The light source as claimed in claim 16, wherein at least one of the light-emitting diodes (7) is or are integrated in a semiconductor chip, and the semiconductor chip has a corresponding number of contact pads, which are electrically conductively connected to the corresponding contact pads (10) on the flexible printed circuit (4).

18. (new) The light source as claimed in claim 17, wherein the electrically conductive connections are produced via wires which are connected to the contact pads on the flexible printed circuit and the semiconductor chip by soldering, bonding or adhesive bonding.

19. (new) The light source as claimed in claim 11, wherein the light-emitting diodes (7) are arranged in an encapsulation compound (11).

20. (new) The light source as claimed in claim 19, wherein the encapsulation compound (11) extends as far as a light outlet surface of the light-emitting diodes (7).

R E M A R K S

This amendment is requested to be entered simultaneously with filing this application.

Claims 1-10 have been cancelled without prejudice or disclaimer of the subject matter therein and claims 11-20 are presented therefor which have the same subject matter of claims 1-10, respectively, and present the claims in accordance with USA practice under 35 USC 112 and eliminate multiple-dependent form claims.


No multiple-dependent claims exist in this application as of the filing date and no multiple-dependent claim fees apply.

The abstract, specification and claims have also been amended for formal improvement to comply with USA practice.

The new Abstract is presented on a separate page herewith.

Please enter this Preliminary Amendment prior to calculating the claim fees and prior to an action on the merits, which is respectfully requested.

Respectfully submitted,
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Abstract

A light source is described, which is composed of a large number of light-emitting diodes (7) in an array arrangement. The light source comprises a mounting board (2) on which a flexible printed circuit (4) is adhesively bonded, on whose free surface a large number of light-emitting diodes (7) are mounted. Their lines (8) make contact with contact pads (10) at the ends of conductor tracks (9) on the flexible printed circuit (4).